Service Trouble Shooting Guide 6/2012

The following code flashes will manifest when the unit sensors or switches have detected a problem outside of their performance parameters
The unit may have locked out and the compressor will not be running or in stasis with the diagnosis light flashing.
The safeties are all designed to protect the compressor

Code Flash							
None	Standby						
1 flash	Cool call in place	OK , compressor running	No alarms in place				
2 flash	Low refrigerant temp (T/R)	Check resistance of sensor Approx 14K ohms @ 65 deg F	YES	Check following: Temp @ sensor location ? Sensor opens @ 40 deg F, resets @ 65 deg F	Loose sensor or wiring	Reconnect; reset board	Note: Sensor will reset when it reaches its operating range. Unit will then resume its cool call to compressor.
					Restricted air flow	Remove any obstructions	
					Low fan efficiency	Check fan rotation direction	Fan Capacitors
				Ambient air too cold	Air too cold for cool mode		
			NO	Replace sensor			
3 flash	Water outlet temp(T/W)	Check resistance of sensor Approx 14K ohms @ 65 deg F	YES	Check following: Location of sensor - is it on condensor water OUT line?			
				Temp of supply water ? Optimum temp 85 - 125 deg F Sensor disables compressor > 140 degF	Advise maintenance to lower or raise loop temperature if necessary		Note: Sensor will reset when it reaches its operating range. Unit will then resume its cool call to compressor.
				OFF < 55 degF ON > 60 DegF OFF > 140 degF ON < 120 degF			
			NO	Replace sensor			
4 flash	Low Air Temp(T/A)	Check resistance of sensor Approx 14K ohms @ 65 deg F	YES	Intake air too cold	Air at fan enclosure too cold 40 degF sensor OFF 55 deg sensor ON		Note: Sensor will reset when it reaches it operating range. Unit will then resume its cool call to the compressor.
			NO	Replace sensor			

5 flash	Low refrigerant pressure (LP)	Low pressure on suction side of compressor	Check pressure in system with unit OFF R22 should be around 100 psi internal R410A approx 180psi	25% to 50% loss	Insufficient refrigerant. When running, suction pressure drops low enough to open LP switch		Detect leak and repair Recharge unit
				R22~100psi / R410A~ 180psi	Check switch ; should be ON and show continuity Suction at 50 / 65 psi(R22) or 130 / 140psi (R410A)	No	Change switch
						Yes	Check for Lack of air movement over coil Check fan capacitors Burnt out fan Low ambient air temp Fan rotation direction
					R22 Open : 25 +/- 3 psi Close : 50 +/- 5 psi	R410A Open: 60 +/- 3 psi Close: 90 +/- 3psi	
6 flash	High refrigerant pressure (HP)	High pressure on discharge R22 Open @ 375 +/- 10 psi Close @ 275 +/- 10 psi R410A Open @ 600 +/- 10 psi Close@ 450 +/- 10 psi	Check HP switch for continuity with unit OFF. At standing pressure of 100 psi (R22) or 180psi (R410A) , switch should be ON	On	(Good flow Delta T ~ 12 to 15 degF) Insufficient water cooling	Check cooling water flow Reversed flow Actuator stuck in heat mode Water valve jammed in heat Air in refrigerant	Possible restriction,may need flush Switch hoses Check relay; change actuator if necessary Change valve Drain and recharge
				Off	HP switch locked open	Check wires to switch for continuity Change HP switch	
7 flash	Condensate switch	Check water level in drain pan	Full	Check drainage system for blockage		Check slope so that water drains away	
			Dry	Float switch active due to incorrect height position. Readjust float height.			
				Sensor type -- possible damage , try change			

Unit will continuously reset but cause erratic operating intervals. No hard lock out.

If change not possible — Note: If the 7 flash can not be cleared , removing the CO connect at the board and then resetting will allow the unit to run in a normal cool mode

Miscellaneous Problems